Claims

1. A method for data extraction from a data stream containing at least one data packet, comprising the steps of:

- comparing a bit stream derived from a received digital data stream with an expected bit sequence to determine a correlation value (CorrVal) for detecting a data packet,
- starting data extraction when the correlation value (CorrVal) exceeds a threshold value (CorrThres) indicating that a data packet has been detected,
- continuing comparing the received bit stream with the expected bit sequence to determine a new correlation value (CorrVal), and
- restarting data extraction when the new correlation value (CorrVal) exceeds the former correlation value (MaxCorrVal).

2. The method as claimed in claim 1, wherein the threshold value (CorrThres) is a programmable value.

3. The method as claimed in claim 1, wherein the correlation value (CorrVal) is stored as correlation value (MaxCorrVal) each time data extraction is started or restarted and the new correlation value (CorrVal) continuousy determined after starting or restarting data extraction is compared with the actually stored correlation value (MaxCorrVal).

4. The method as claimed in claim 1, wherein data extracted prior to restarting data extraction is rejected.

5. The method as claimed in claim 1, wherein after detecting a data packet an initial timing estimate (InitTiming) is determined prior to starting data extraction that synchronizes sampling of bits from a data stream for data extraction with data stream symbols.

6. The method as claimed in claim 5, wherein the timing of the sample process is continously tracked by comparing the timing of symbols within the oversampled bitstream with the actual timing of the sample process and correcting the timing of the sample process if the deviation between the timing of the sample process and the timing of symbols exceeds a certain value.

7. A device for performing the method for data extraction from a data stream containing at least one data packet as claimed in claim 1, the device comprises:

- a data extraction unit (19, 20, 21, 22) for extracting data from a received data stream,
- a packet detector (17) for comparing a bit stream derived from a received digital data stream with an expected bit sequence to determine a correlation value (CorrVal), and
- a sync-control module (23) receiving the correlation value (CorrVal) from the packet detector (17) that controls the data extraction unit (19, 20, 21, 22) for starting data extraction when the correlation value (CorrVal) exceeds a threshold value (CorrThres).

8. The device as claimed in claim 7, wherein the device further comprises an initial timing estimator (18) which receives the data stream for determining an initial timing estimate (InitTiming) prior to starting data extraction for synchronizing data extraction with data stream symbols, the initial timing estimate (InitTiming) is output to the sync-control module (23).

9. The device as claimed in claim 7 or 8, wherein the data extraction unit comprises a DC estimator (19) deriving a DC estimate from the received data stream, a comparator (20) for performing a bit decision on the data of the received data stream to derive an oversampled bit stream, the comparator (20) has first and second inputs for receiving the DC estimate from the DC estimator (19) and the data stream, respectively, and a sample-and-hold module (22) for sampling the oversampled bit stream received from the comparator (20).

10. The device as claimed in claim 9, wherein the data extraction unit further comprises a timing estimator (21) receiving the oversampled bit stream output by the comparator (20) for tracking the initial timing and for controlling the sample-and-hold module (22).